

**Estimates for Chronic Health Conditions, Risk Factors, Health  
Indicators, and Preventive Health Practices by Race/Ethnicity**

**State of Michigan**

**Behavioral Risk Factor Survey  
2005**

Chronic Disease Epidemiology Section  
Bureau of Epidemiology  
Michigan Department of Community Health

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## **Introduction**

The Michigan Behavioral Risk Factor Survey (BRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older that is conducted through a collaborative effort among the Behavioral Surveillance Branch (BSB) of the Centers for Disease Control and Prevention, the Michigan State University Institute for Public Policy and Social Research (IPPSR), and the Michigan Department of Community Health. Michigan BRFs data contribute to the national [Behavioral Risk Factor Surveillance System](#) that is managed by BSB.

For the 2005 Michigan BRFs, data were collected quarterly by IPPSR. The sample of telephone numbers that were utilized for data collection was selected using a list-assisted, random-digit-dialed methodology with a disproportionate stratification based on phone bank density, and whether or not the phone numbers were directory listed. The total sample size of completed interviews was 12,136, which included 10,305 White/Non-Hispanics; 1,039 Black/Non-Hispanics; 138 Asian or Other Pacific Islander/Non-Hispanics; 80 American Indian, Alaska Native/Non-Hispanics; 51 Other/Non-Hispanics, 194 Multi-racial/Non-Hispanics; and 239 Hispanics. Those who reported multiple races were asked a follow-up question concerning which race best represents their race; this was not included in the analysis. Due to a small sample size, estimates on Other/Non-Hispanics were excluded from the tables.

State-specific, population-based prevalence estimates and confidence intervals were calculated for health risk behaviors, preventive health practices, and chronic conditions among the adult population in Michigan. These estimates were weighted to adjust for the probabilities of selection and a post-stratification weighting factor that adjusted for the distribution of Michigan adults by age, sex, and race/ethnicity at the state level. These analyses were performed in SUDAAN, a statistical computing program that was designed for complex sample surveys. In tables of MI BRFs results from previous years, confidence intervals were presented as +/- half of the width of a symmetric confidence interval (1.96 times the standard error). Since the 2004 Michigan BRFs tables, however, we are able to include asymmetric confidence intervals as they are now calculated by SUDAAN (version 9.0).

2005 Michigan BRFS Results by Race/Ethnicity  
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**Table 1: Chronic Health Conditions by Race/Ethnicity**

**Preliminary 2005 Michigan BRFS Results  
% (95% Confidence Interval)**

<b>Chronic Health Condition</b>	<b>Michigan Total</b>	<b>White, Non-Hispanic</b>	<b>Black, Non-Hispanic</b>	<b>Asian or Other Pacific Islander, Non-Hispanic</b>	<b>American Indian / Alaska Native, Non-Hispanic</b>	<b>Multi-racial, Non-Hispanic</b>	<b>Hispanic</b>
<b>Sample Size (n)</b>	<b>12,046</b>	<b>10,305</b>	<b>1,039</b>	<b>138</b>	<b>80</b>	<b>194</b>	<b>239</b>
Ever Told Diabetes <sup>1</sup>	8.1 (7.6 – 8.7)	7.6 (7.1 – 8.2)	11.6 (9.6 – 13.9)	3.8 (1.3 – 10.4)	8.6 (3.9 – 17.7)	9.1 (5.9 – 13.8)	8.5 (5.3 – 13.3)
Ever Told Have Asthma <sup>2</sup>	13.8 (13.0 – 14.5)	13.2 (12.4 – 14.0)	16.1 (13.6 – 19.1)	6.7 (3.4 – 12.9)	17.2 (9.5 – 29.0)	22.1 (15.9 – 29.9)	18.3 (13.2 – 24.9)
Still Have Asthma <sup>3</sup>	8.9 (8.3 – 9.6)	8.3 (7.7 – 9.0)	10.9 (8.8 – 13.3)	3.8 (1.6 – 8.6)	13.7 (6.9 – 25.4)	18.7 (12.9 – 26.4)	13.0 (8.7 – 19.0)
Ever Told Heart Attack <sup>4</sup>	4.7 (4.3 – 5.1)	4.8 (4.4 – 5.2)	4.5 (3.3 – 6.0)	1.8 (0.5 – 5.8)	5.6 (2.0 – 14.6)	7.2 (4.5 – 11.4)	2.8 (1.4 – 5.6)
Ever Told Angina or Coronary Heart Disease <sup>5</sup>	4.6 (4.2 – 5.0)	4.7 (4.3 – 5.1)	3.9 (2.9 – 5.3)	3.1 (0.9 – 9.8)	2.0 (0.6 – 6.2)	8.0 (4.9 – 12.9)	2.2 (1.0 – 4.7)
Ever Told Stroke <sup>6</sup>	3.0 (2.7 – 3.3)	2.8 (2.5 – 3.1)	4.0 (2.8 – 5.6)	0*	4.9 (1.5 – 14.6)	4.4 (2.2 – 8.5)	3.4 (1.8 – 6.5)
Ever Told High Blood Pressure <sup>7</sup>	27.9 (27.0 – 28.8)	27.0 (26.0 – 27.9)	35.0 (31.6 – 38.4)	17.3 (11.1 – 25.8)	25.7 (16.6 – 37.6)	33.9 (26.5 – 42.2)	23.9 (18.2 – 30.6)
Told High Cholesterol Among Those Ever Checked <sup>8</sup>	38.8 (37.7 – 39.9)	39.5 (38.3 – 40.7)	35.2 (31.5 – 39.1)	30.0 (20.7 – 41.2)	48.2 (34.5 – 62.2)	38.9 (30.3 – 48.3)	38.8 (30.9 – 47.4)
Chronic Joint Symptoms, Not Doctor Diagnosed Arthritis <sup>9</sup>	14.5 (13.8 – 15.3)	14.7 (13.8 – 15.5)	13.3 (11.0 – 16.0)	11.4 (7.2 – 17.6)	16.0 (8.1 – 29.1)	17.2 (11.5 – 24.7)	16.8 (11.8 – 23.3)
Doctor Diagnosed Arthritis <sup>10</sup>	31.0 (30.0 – 31.9)	31.4 (30.4 – 32.4)	29.9 (26.8 – 33.2)	14.8 (9.1 – 23.1)	32.9 (22.6 – 45.1)	43.7 (35.6 – 52.1)	21.5 (16.4 – 27.8)
Disability <sup>11</sup>	21.4 (20.6 – 22.3)	20.9 (20.0 – 21.8)	24.4 (21.5 – 27.6)	7.0 (3.8 – 12.7)	36.6 (25.4 – 49.5)	36.7 (29.3 – 44.7)	17.4 (12.5 – 23.6)

Please refer to the appendix for chronic health condition definitions.

\* Zero respondents in this subgroup reported ever being told by a doctor that they had a stroke.

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<b>Table 2: Health Risk Behaviors by Race/Ethnicity</b> <b>Preliminary 2005 Michigan BRFS Results</b> <b>% (95% Confidence Interval)</b>							
<b>Health Risk Behaviors</b>	<b>Michigan Total</b>	<b>White, Non-Hispanic</b>	<b>Black, Non-Hispanic</b>	<b>Asian or Other Pacific Islander, Non-Hispanic</b>	<b>American Indian / Alaska Native, Non-Hispanic</b>	<b>Multi-racial, Non-Hispanic</b>	<b>Hispanic</b>
<b>Sample Size (n)</b>	<b>12,046</b>	<b>10,305</b>	<b>1,039</b>	<b>138</b>	<b>80</b>	<b>194</b>	<b>239</b>
Obese <sup>12</sup>	26.3 (25.4 – 27.3)	25.4 (24.4 – 26.4)	36.1 (32.5 – 39.8)	6.1 (3.3 – 11.0)	26.0 (16.6 – 38.3)	30.3 (23.0 – 38.8)	24.4 (18.4 – 31.5)
No Leisure-Time Physical Activity <sup>13</sup>	22.6 (21.7 – 23.5)	21.2 (20.3 – 22.1)	32.1 (28.8 – 35.6)	17.6 (11.9 – 25.2)	26.6 (17.3 – 38.6)	26.1 (19.6 – 33.9)	18.2 (13.5 – 24.1)
Inadequate Physical Activity <sup>14</sup>	50.6 (49.5 – 51.7)	48.7 (47.5 – 49.9)	58.4 (54.5 – 62.2)	63.4 (53.8 – 72.1)	35.7 (24.3 – 49.1)	51.8 (43.1 – 60.4)	57.2 (49.7 – 64.5)
Inadequate Moderate Physical Activity (< 30 minutes, 5 times / week) <sup>15</sup>	62.5 (61.4 – 63.6)	60.3 (59.2 – 61.5)	71.5 (67.9 – 74.9)	76.6 (67.5 – 83.7)	45.9 (33.2 – 59.2)	64.1 (55.4 – 72.0)	70.2 (62.9 – 76.7)
Inadequate Vigorous Physical Activity (< 20 minutes, 3 times / week) <sup>16</sup>	72.1 (71.0 – 73.1)	71.5 (70.4 – 72.6)	74.6 (71.0 – 77.9)	79.9 (71.1 – 86.5)	66.8 (52.8 – 78.3)	70.4 (61.7 – 77.8)	70.5 (63.2 – 77.0)
Inadequate Fruit and Vegetable Consumption <sup>17</sup>	77.1 (76.2 – 78.0)	77.2 (76.3 – 78.2)	77.4 (74.1 – 80.4)	69.3 (60.1 – 77.2)	77.1 (63.7 – 86.5)	79.6 (72.6 – 85.1)	78.0 (71.3 – 83.5)
Current Smoker <sup>18</sup>	21.8 (20.8 – 22.7)	20.9 (19.9 – 21.9)	23.9 (20.9 – 27.2)	13.6 (8.2 – 21.7)	41.2 (29.4 – 54.2)	39.3 (31.4 – 47.9)	28.4 (22.1 – 35.6)
Heavy Drinking <sup>19</sup>	5.6 (5.1 – 6.2)	6.2 (5.6 – 6.8)	3.4 (2.2 – 5.2)	1.8 (0.4 – 7.5)	6.5 (2.5 – 15.9)	5.0 (2.7 – 9.0)	5.5 (2.9 – 10.1)
Binge Drinking <sup>20</sup>	16.6 (15.7 – 17.5)	17.8 (16.9 – 18.9)	10.4 (8.1 – 13.1)	6.5 (2.9 – 13.9)	24.1 (14.1 – 37.9)	19.0 (12.7 – 27.5)	16.2 (11.2 – 22.8)
Engaged in At-Risk Behaviors for Acquiring HIV Among Adults Aged 18 – 64 Years <sup>21</sup>	4.2 (3.7 – 4.9)	3.8 (3.2 – 4.5)	7.1 (5.1 – 9.8)	4.3 (1.8 – 10.1)	2.5 (0.8 – 7.6)	3.2 (0.8 – 11.1)	6.1 (3.0 – 11.9)
Please refer to the appendix for health risk behavior definitions.							

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**Table 3: Health Indicators by Race/Ethnicity**

**Preliminary 2005 Michigan BRFS Results  
% (95% Confidence Interval)**

<b>Health Indicators</b>	<b>Michigan Total</b>	<b>White, Non-Hispanic</b>	<b>Black, Non-Hispanic</b>	<b>Asian or Other Pacific Islander, Non-Hispanic</b>	<b>American Indian / Alaska Native, Non-Hispanic</b>	<b>Multi-racial, Non-Hispanic</b>	<b>Hispanic</b>
<b>Sample Size (n)</b>	<b>12,046</b>	<b>10,305</b>	<b>1,039</b>	<b>138</b>	<b>80</b>	<b>194</b>	<b>239</b>
General Health, Fair or Poor <sup>22</sup>	15.1 (14.4 – 15.9)	13.6 (12.9 – 14.4)	23.2 (20.4 – 26.2)	6.7 (3.4 – 12.8)	24.5 (15.9 – 35.8)	24.3 (17.9 – 32.1)	15.5 (10.9 – 21.5)
Poor Physical Health on at least 14 Days in the Past Month <sup>23</sup>	11.0 (10.4 – 11.7)	10.4 (9.8 – 11.1)	14.4 (12.1 – 17.0)	3.8 (1.8 – 8.2)	20.4 (12.4 – 31.7)	17.0 (11.7 – 23.9)	11.8 (7.7 – 17.6)
Poor Mental Health on at least 14 Days in the Past Month <sup>24</sup>	10.7 (10.1 – 11.4)	10.2 (9.5 – 10.9)	12.0 (9.8 – 14.6)	6.4 (3.3 – 12.1)	22.9 (14.2 – 34.7)	17.2 (11.7 – 24.7)	16.6 (11.8 – 22.8)
Activity Limitation on at least 14 Days in the Past Month <sup>25</sup>	7.2 (6.7 – 7.8)	6.7 (6.1 – 7.2)	10.0 (8.1 – 12.4)	0.7 (0.1 – 4.9)	16.8 (9.6 – 27.7)	12.0 (7.6 – 18.6)	10.6 (6.8 – 16.1)
No Health Care Coverage (Among 18 – 64 year olds) <sup>26</sup>	14.4 (13.5 – 15.4)	13.1 (12.1 – 14.1)	18.5 (15.4 – 22.1)	10.9 (6.4 – 18.0)	29.8 (18.8 – 43.7)	22.8 (15.6 – 31.9)	26.6 (20.0 – 34.4)
No Personal Health Care Provider <sup>27</sup>	14.4 (13.6 – 15.3)	12.6 (11.8 – 13.5)	21.0 (17.9 – 24.5)	25.4 (18.2 – 34.1)	23.1 (13.5 – 36.6)	18.0 (12.2 – 25.9)	22.6 (16.9 – 29.5)
No Health Care Access During Past 12 Months Due to Cost <sup>28</sup>	12.7 (12.0 – 13.5)	10.9 (10.1 – 11.7)	19.6 (16.8 – 22.6)	16.5 (10.5 – 24.9)	20.3 (11.3 – 33.7)	27.1 (20.4 – 35.1)	18.9 (13.6 – 25.6)
Activity Limitation <sup>29</sup>	19.8 (19.0 – 20.6)	19.3 (18.4 – 20.2)	22.3 (19.5 – 25.4)	7.0 (3.8 – 12.7)	34.6 (23.7 – 47.4)	34.0 (26.9 – 42.0)	16.8 (12.0 – 23.0)
Used Special Equipment <sup>30</sup>	6.9 (6.4 – 7.4)	6.2 (5.8 – 6.7)	10.6 (8.7 – 12.9)	0.3 (0.04 – 2.1)	12.8 (6.6 – 23.4)	16.0 (11.0 – 22.7)	3.8 (1.9 – 7.3)
Rarely or Never Received the Social and Emotional Support that is Needed <sup>31</sup>	7.3 (6.7 – 7.9)	6.0 (5.5 – 6.6)	11.9 (9.6 – 14.6)	14.6 (8.8 – 23.5)	15.6 (7.6 – 29.2)	12.8 (8.4 – 19.2)	10.3 (6.6 – 15.8)
Dissatisfied or Very Dissatisfied with Life <sup>32</sup>	6.3 (5.8 – 6.8)	5.4 (4.9 – 5.9)	9.7 (7.7 – 12.3)	5.5 (2.5 – 11.6)	9.6 (4.5 – 19.5)	18.7 (12.6 – 26.9)	8.4 (4.9 – 13.9)
Please refer to the appendix for health indicator definitions.							

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<b>Table 4: Preventive Health Practices by Race/Ethnicity</b> <b>Preliminary 2005 Michigan BRFs Results</b> <b>% (95% Confidence Interval)</b>							
<b>Preventive Health Practices</b>	<b>Michigan Total</b>	<b>White, Non-Hispanic</b>	<b>Black, Non-Hispanic</b>	<b>Asian or Other Pacific Islander, Non-Hispanic</b>	<b>American Indian / Alaska Native, Non-Hispanic</b>	<b>Multi-racial, Non-Hispanic</b>	<b>Hispanic</b>
<b>Sample Size (n)</b>	<b>12,046</b>	<b>10,305</b>	<b>1,039</b>	<b>138</b>	<b>80</b>	<b>194</b>	<b>239</b>
No Routine Checkup in Past Year <sup>33</sup>	29.5 (28.5 – 30.6)	30.2 (29.1 – 31.4)	22.1 (19.0 – 25.6)	34.6 (26.4 – 43.9)	37.5 (25.8 – 50.9)	32.7 (25.2 – 41.2)	35.4 (28.6 – 42.8)
Cholesterol Ever Checked <sup>34</sup>	80.2 (79.1 – 81.2)	80.6 (79.5 – 81.7)	81.8 (78.5 – 84.7)	67.7 (58.3 – 75.9)	77.3 (64.7 – 86.4)	80.2 (72.4 – 86.2)	71.1 (63.7 – 77.6)
Cholesterol Checked Within Past Five Years <sup>35</sup>	76.5 (75.4 – 77.5)	76.5 (75.4 – 77.7)	79.7 (76.3 – 82.8)	66.5 (57.0 – 74.8)	68.5 (54.9 – 79.5)	76.8 (68.8 – 83.2)	68.7 (61.2 – 75.3)
Ever Had an HIV Test Among Those Aged 18 – 64 Years <sup>36</sup>	39.4 (38.1 – 40.6)	35.8 (34.5 – 37.1)	58.7 (54.5 – 62.7)	30.0 (22.1 – 39.3)	57.5 (43.6 – 70.3)	49.6 (40.3 – 58.9)	48.2 (40.5 – 56.0)
Please refer to the appendix for preventive health practice definitions.							

## **Appendix: Definitions**

- <sup>1</sup> The proportion who reported that they were ever told by a doctor that they have diabetes. Women who had diabetes only during pregnancy and adults who were diagnosed with pre-diabetes were considered to not have been diagnosed with diabetes.
- <sup>2</sup> The proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma.
- <sup>3</sup> Among all respondents, the proportion who reported that they still had asthma.
- <sup>4</sup> Among all adults, the proportion who had ever been told by a doctor that they had a heart attack or myocardial infarction.
- <sup>5</sup> Among all adults, the proportion who had ever been told by a doctor that they had angina or coronary heart disease.
- <sup>6</sup> Among all adults, the proportion who had ever been told by a doctor that they had a stroke.
- <sup>7</sup> The proportion who reported that they were ever told by a doctor that they have high blood pressure (HBP). Women who had HBP only during pregnancy and adults who were borderline hypertensive were considered to not have been diagnosed.
- <sup>8</sup> Among those who ever had their blood cholesterol checked, the proportion who reported that a doctor, nurse, or other health professional had told them that their cholesterol was high.
- <sup>9</sup> The proportion who reported having had any symptoms of pain, aching, or stiffness in or around the joint (excluding the back or neck) during the past 30 days that first started more than three months ago and who have not been diagnosed with arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia by a health care professional.
- <sup>10</sup> The proportion who reported ever being told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.
- <sup>11</sup> The proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported that they required use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem.
- <sup>12</sup> Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)<sup>2</sup>]. Weight and height were self-reported. Pregnant women were excluded. The proportion of respondents whose BMI was greater than or equal to 30.0.
- <sup>13</sup> The proportion who reported not participating in any leisure-time physical activities or exercises such as running, calisthenics, golf, gardening, or walking during the past month.
- <sup>14</sup> The proportion who reported that they do not usually do moderate physical activities for a total of at least 30 minutes on five or more days per week or vigorous physical activities for a total of at least 20 minutes on three or more days per week while not at work.
- <sup>15</sup> The proportion who reported that they do not usually do moderate physical activities, such as brisk walking, bicycling, vacuuming, and gardening for at least 30 minutes on five or more days per week while not at work.
- <sup>16</sup> The proportion who reported that they do not usually participate in vigorous physical activities, such as running, aerobics, and heavy yard work, for at least 20 minutes on three or more days per week while not at work.
- <sup>17</sup> The proportion whose total reported consumption of fruits (including juice) and vegetables was less than five times per day.
- <sup>18</sup> The proportion who reported that they had ever smoked at least 100 cigarettes (five packs) in their life and that they smoke cigarettes now, either every day or on some days.
- <sup>19</sup> The proportion who reported consuming on average more than two alcoholic beverages per day for men or more than one alcoholic beverage per day for women.
- <sup>20</sup> The proportion who reported consuming five or more drinks per occasion at least once in the previous month.
- <sup>21</sup> Among those aged 18 - 64 years, the proportion who reported that they had done at least one of the following in the past year: used intravenous drugs, been treated for a sexually transmitted or venereal disease, given or received money or drugs in exchange for sex, had anal sex without a condom.
- <sup>22</sup> The proportion who reported that their health, in general, was either fair or poor.
- <sup>23</sup> The proportion who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.



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- <sup>24</sup> The proportion who reported 14 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days.
- <sup>25</sup> The proportion who reported 14 or more days in the past 30 days in which either poor physical health or poor mental health kept them from doing their usual activities, such as self-care, work, and recreation.
- <sup>26</sup> Among those aged 18-64, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare. (n=8,957)
- <sup>27</sup> The proportion who reported that they did not have anyone that they thought of as their personal doctor or health care provider.
- <sup>28</sup> The proportion who reported that in the past 12 months that there was a time when they could not see a doctor when they needed to due to the cost.
- <sup>29</sup> The proportion who reported being limited in any activities because of physical, mental, or emotional problems.
- <sup>30</sup> The proportion who reported that they required use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem.
- <sup>31</sup> The proportion who reported either "Rarely" or "Never" to the following question: "How often do you get the social and emotional support you need?"
- <sup>32</sup> The proportion who reported either "Dissatisfied" or "Very Dissatisfied" to the following question: "In general, how satisfied are you with your life?"
- <sup>33</sup> The proportion who reported that they did not have a routine checkup in the past year.
- <sup>34</sup> The proportion who reported ever having had their blood cholesterol checked.
- <sup>35</sup> The proportion who reported that they have had their blood cholesterol checked within the past five years.
- <sup>36</sup> Note: "Don't know" was considered a valid response. Among those aged 18 - 64 years, the proportion who reported that they ever had been tested for HIV, apart from tests that were part of a blood donation.